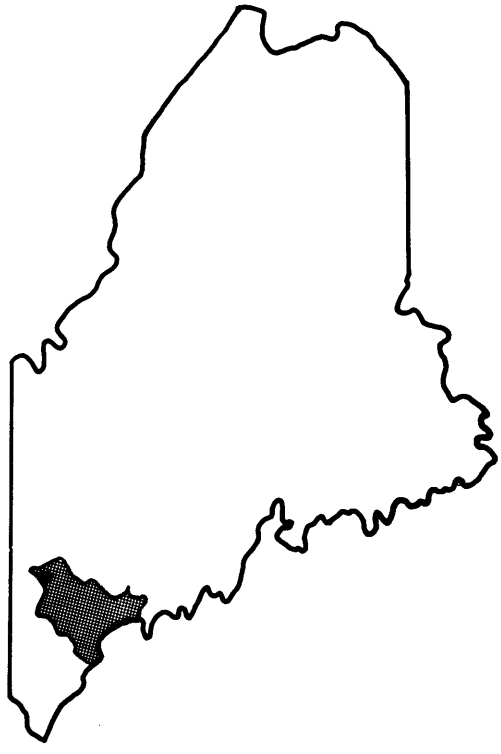
FLOOD INSURANCE STUDY

TOWN OF BRIDGTON, MAINE
CUMBERLAND COUNTY



NOVEMBER 3, 1981

Federal Emergency Management Agency

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TOWN OF BRIDGTON, MAINE

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study investigates the existence and severity of flood hazards in the Town of Bridgton, Cumberland County, Maine, and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study will be used to convert Bridgton to the regular program of flood insurance by the Federal Emergency Management Agency (FEMA). Local and regional planners will use this study in their efforts to promote sound flood plain management.

In some states or communities, flood plain management criteria or regulations may exist that are more restrictive or comprehensive than those on which these federally-supported studies are based. These criteria take precedence over the minimum federal criteria for purposes of regulating development in the flood plain, as set forth in the Code of Federal Regulations at 44 CFR, 60.3. In such cases, however, it shall be understood that the state (or other jurisdictional agency) shall be able to explain these requirements and criteria.

1.2 Authority and Acknowledgements

The source of authority for this Flood Insurance Study is the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

The hydrologic and hydraulic analyses for this study were prepared by the Soil Conservation Service for the Federal Emergency Management Agency, under Inter-Agency Agreement No. IAA-H-17-78, Project Order No. 5. This work was completed in March 1980.

1.3 Coordination

In January 1978, streams requiring detailed and approximate study were identified at an initial Consultation and Coordination Officer's (CCO) meeting attended by representatives of the FEMA, the Town of Bridgton, and the Soil Conservation Service (SCS), the study contractor. During the course of the study, flood elevations and boundaries and floodway delineations were reviewed with community officials. On September 30, 1980, the results of the study were reviewed at a final CCO meeting held with representatives of the FEMA, the town, and the study contractor.

2.0 AREA STUDIED

2.1 Scope of Study

This Flood Insurance Study covers the incorporated area of the Town of Bridgton, Cumberland County, Maine. The area of study is shown on the Vicinity Map (Figure 1).

Stevens Brook from Kansas Road to Highland Lake, Willett Brook from the confluence with Stevens Brook to Willett Road, and Corn Shop Brook from the confluence with Stevens Brook to Park Street were studied by detailed methods. As the study progressed, it was evident that there were additional flood-prone properties on Highland Lake and Long Lake, therefore, it was decided to add those bodies of water in their entirety as part of the detailed study area. The areas studied by detailed methods were selected with priority given to all known flood hazard areas and areas of projected development and proposed construction for the next five years, through March 1985.

Corn Shop Brook above Park Street, Day Brook, Holt Pond, Ingalls Pond, Moose Pond, Otter Pond, Peabody Pond, Stevens Brook below Kansas Road, Willett Brook above Willett Road, Woods Pond, and several unnamed areas were all studied by approximate methods. Approximate methods of analysis were used to study those areas having low development and minimal flood hazards as identified at the initiation of the study. The scope and methods of study were proposed to and agreed upon by the FEMA.

2.2 Community Description

The Town of Bridgton is located in the northwestern portion of Cumberland County in southwestern Maine. It is bordered by the Town of Waterford to the north, the Town of Harrison to the east, the Town of Naples to the southeast, the Town of Sebago to the south, the Town of Denmark to the southwest, the Town of Fryeburg to the west, and the Town of Sweden to the northwest. Bridgton is situated approximately 30 miles west of the City of Lewiston, Maine, and approximately 35 miles north-northwest of the City of Portland, Maine.

The total land area contained within the corporate limits is 57.5 square miles. According to the Maine Department of Human Services, the population of Bridgton increased from 2,967 in 1970 to an estimated 3,281 in 1977 (Reference 1).

Stevens Brook, a tributary of Long Lake, flows east from Highland Lake through downtown Bridgton into Long Lake. It is 2.2 miles long and has a drainage area of 42.5 square miles. Willett Brook is a tributary of

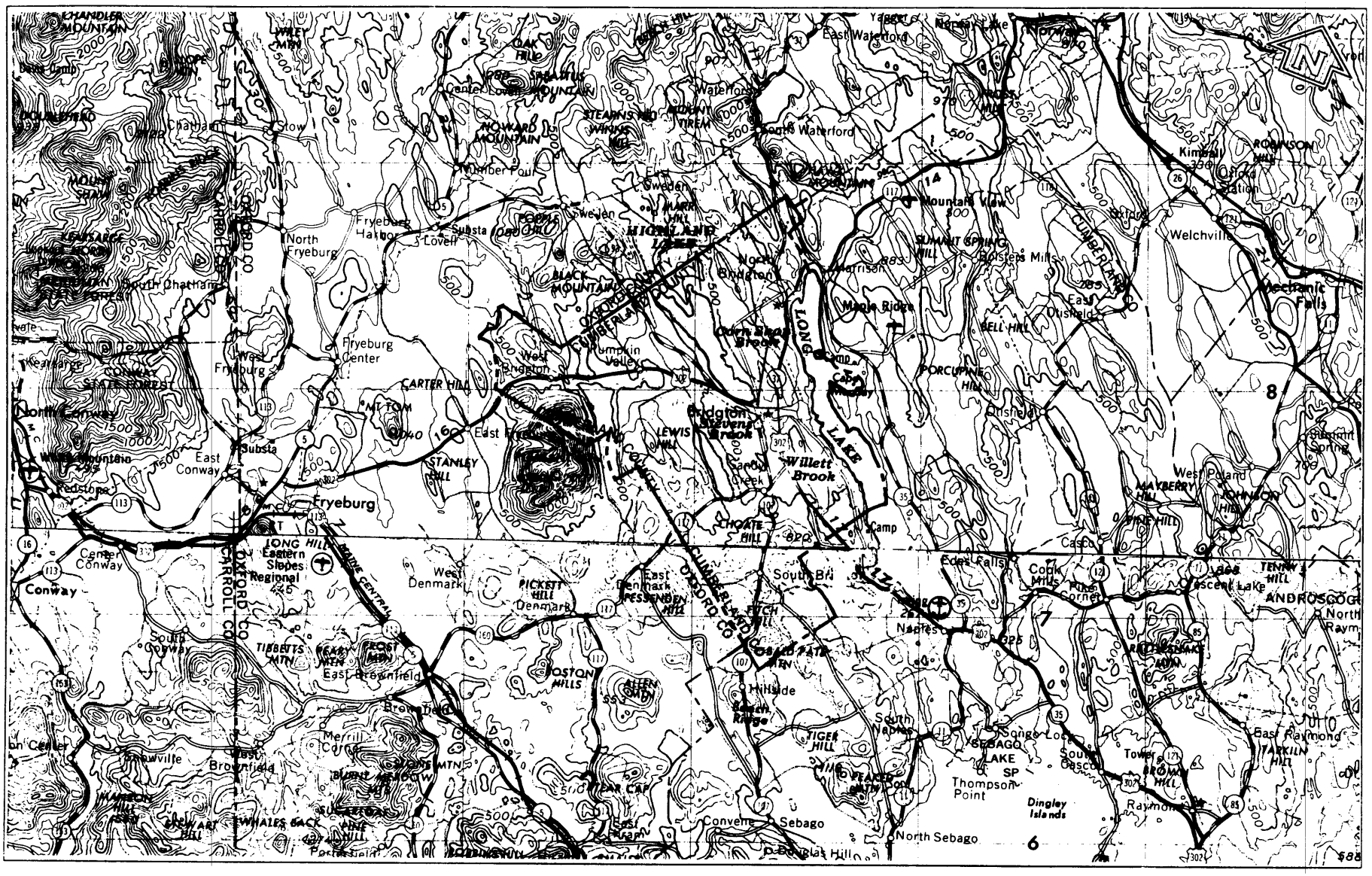


FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF BRIDGTON, ME
(CUMBERLAND CO.)

APPROXIMATE SCALE

4 0 4 8 12 MILES

VICINITY MAP

Stevens Brook and flows north to its confluence with Stevens Brook in downtown Bridgton. It has length of 6.6 miles and a drainage area of 20.2 square miles. Corn Shop Brook also flows south to its confluence with Stevens Brook in downtown Bridgton. It is 0.2 mile long and has a drainage area of 0.7 square mile.

Highland Lake is located in northern Bridgton, has a surface area of 1,400 acres, and a drainage area of 20.5 square miles at its outlet. Long Lake, the major portion of which is located in eastern Bridgton and forms Bridgton's eastern border with the Town of Harrison, outlets into the Bay of Naples in the Town of Naples. It has a surface area of 4,900 acres, 3,100 of which are in Bridgton, and a drainage area of 114 square miles.

The majority of the land area of Bridgton is devoted to timber stands. Within the flood plains studied, development consists of an urban area in downtown Bridgton, which includes businesses, homes, and government buildings. Seasonal and single-family residences, recreational property, and businesses are located in the flood plains of Highland and Long Lakes. The majority of development in Bridgton is centered around the downtown area, with substantial development also in the vicinities of North Bridgton, South Bridgton, U. S. Route 302, Highland Lake, and Long Lake.

The Bridgton area receives a mean annual precipitation of 45 inches, which includes the water equivalent of 95 inches of snow. The precipitation is evenly distributed throughout the year; however, snow-melt accounts for a large part of the runoff. The mean annual temperature of the town is approximately 45.6 degrees Fahrenheit (°F), ranging from means of 20.4°F in January to 70°F in July (Reference 2).

2.3 Principal Flood Problems

Figures kept on Long Lake and the Bay of Naples at Songo Lock from 1920 to 1960 show major floods occurred in 1920, 1936, and 1953 (Reference 3). These floods have recurrence intervals of approximately 70, 70, and 20 years, respectively.

Major floods occurred on Stevens and Willett Brooks in 1896, 1936, and 1953. The most destructive flood in recent history is considered to be that of March 1953. Under present conditions, the 1953 flood was estimated to have a recurrence interval of approximately 100 years. Figures 2 and 3 show flooding in downtown Bridgton during the March 1953 flood.

The history of flooding in the area has indicated that most flooding occurs in the winter or early spring months as a result of heavy rainfall on snow-covered or frozen ground. Flooding in the summer months is most

Figure 2 - Flooding caused by the overflow of Stevens, Willett, and Corn Shop Brooks at the Post Office Square area in downtown Bridgton on March 27, 1953.

Figure 3 - Flooding caused by the overflow of Stevens, Willett, and Corn Shop Brooks looking east on Main Street in downtown Bridgton on March 27, 1953.

often associated with thunderstorms, although tropical storms occasionally generate prolonged heavy rainfall in the area.

Flooding on Highland and Long Lakes results in damage to single-family residences, numerous seasonal homes, businesses, recreational property, and roads. On Stevens, Willett, and Corn Shop Brooks, flooding results in damage to numerous businesses, several residences, public buildings, roads, and bridges.

2.4 Flood Protection Measures

There are no known existing or planned flood protection structures within the Town of Bridgton. There are five dams on Stevens Brook in the Town of Bridgton. They are Highland Lake Dam, Bisbee Mill Dam, Tannery Dam, an unnamed dam located approximately 280 feet downstream of Highland Road and a power generation dam downstream from Kansas Road. Highland Lake Dam and the unnamed dam are used for recreational purposes only. Bisbee Dam and Tannery Dam no longer provide any significant function to the community.

In 1971, the State of Maine enacted the "Mandatory Zoning and Subdivision Control Law", which requires all municipal units of government to adopt zoning and subdivision control ordinances for shoreland areas. If a municipality fails to adopt zoning and subdivision controls for any reason, the Maine Department of Environmental Protection and the Maine Land Use Regulation Commission shall adopt suitable ordinances for that municipality.

3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data for this study. Flood events of a magnitude which are expected to be equalled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for flood plain management and for flood insurance premium rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent chance, respectively, of being equalled or exceeded during any year. Although the recurrence interval represents the long-term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than one year are considered. For example, the risk of having a flood which equals or exceeds the 100-year flood (one-percent chance of annual occurrence) in any 50-year period is about 40 percent (four in ten) and, for any 90-year period, the risk increases to about 60 percent (six in ten). The analyses reported here reflect flooding potentials based on conditions existing in the community at

the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for floods of the selected recurrence intervals for each flooding source studied in detail affecting the community.

Flood discharge estimates for Stevens, Willett, and Corn Shop Brooks were generated from the SCS TR-20 hydrologic evaluation model, which was developed for a Public Law 566 work plan for Stevens Brook (References 4 and 5). This model utilizes such variables as rainfall-frequency data, soil type, antecedent moisture condition, land use, time of concentration, and drainage area.

A summary of drainage area-peak discharge relationships for the streams studied by detailed methods is shown in Table 1, "Summary of Discharges."

TABLE 1 - SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-YEAR	50-YEAR	100-YEAR	500-YEAR
STEVENS BROOK					
At Smith Avenue	41.95	1,440	2,590	3,070	4,380
1,100 feet upstream of Depot Street	41.00	1,410	2,520	2,910	3,670
75 feet upstream of Beacon Street	20.67	330	620	740	1,320
WILLETT BROOK					
At the confluence with Stevens Brook	20.21	1,350	2,440	2,890	4,130
At Willett Road	19.90	1,330	2,400	2,850	4,070
CORN SHOP BROOK					
At Main Street	0.67	90	190	290	900

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of the flooding sources studied in detail were carried out to provide estimates of the elevations of floods of the selected recurrence intervals along each of these flooding sources.

Water-surface elevations of floods of the selected recurrence intervals were computed using the SCS WSP-2 computer program (Reference 6).

Elevations for the streams studied by detailed methods were started from critical depth calculations at the old Central Maine Power Company dam downstream of Kansas Road.

Water-surface elevations on Long Lake and Highland Lake were obtained through a log-Pearson Type III method using 40 years of stage-storage records at the Songo Locks in Naples (References 7 and 3). The WSP2 program was used to compute water-surface profiles from the Songo Locks to the Bay of Naples, which maintains the same elevation as Long Lake.

A summary of elevation-frequency relationships for Long and Highland Lakes is shown in Table 2, "Summary of Elevations."

TABLE 2 - SUMMARY OF ELEVATIONS

FLOODING SOURCE AND LOCATION	ELEVATION (feet) 10-YEAR	50-YEAR	100-YEAR	500-YEAR
LONG LAKE	273.2	274.0	274.4	275.1
HIGHLAND LAKE	427.4	427.8	427.9	428.3

Cross-section data were obtained from field surveys. All bridges and culverts were field surveyed to obtain elevation data and structural geometry.

Channel roughness factors (Manning's "n") for the hydraulic computations were chosen using engineering judgment based on field observations of the streams and flood plain areas. The channel "n" values for Stevens Brook ranged from 0.022 to 0.075, and the overbank "n" values ranged from 0.035 to 0.100 for all floods. The channel "n" values for Willett Brook ranged from 0.055 to 0.070, and the overbank "n" ranged 0.070 to 0.090 for all floods. For Corn Shop Brook, the channel "n" value was 0.065, and the overbank values ranged from 0.050 to 0.075 for all floods.

Flood profiles were drawn showing computed water-surface elevations to an accuracy of 0.5 foot for floods of the selected recurrence intervals. Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway is computed (Section 4.2), selected cross-section locations are also shown on the Flood Boundary and Floodway Map (Exhibit 3).

All elevations used in this study are referenced to the National Geodetic Vertical Datum of 1929 (NGVD), formerly referred to as Sea Level Datum of 1929. Locations of the elevation reference marks used in the study are shown on the maps.

The hydraulic analyses for this study are based on the effects of unobstructed flow. The flood elevations shown on the profiles are valid only if hydraulic structures remain unobstructed and do not fail.

4.0 FLOOD PLAIN MANAGEMENT APPLICATIONS

The National Flood Insurance Program encourages state and local governments to adopt sound flood plain management programs. Therefore, each Flood Insurance Study includes a flood boundary map designed to assist communities in developing sound flood plain management measures.

4.1 Flood Boundaries

In order to provide a national standard without regional discrimination, the 100-year flood has been adopted by the FEMA as the base flood for purposes of flood plain management measures. The 500-year flood is employed to indicate additional areas of flood risk in the community. For each stream studied in detail, the boundaries of the 100- and 500-year floods have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated by stereoscoping aerial photographs, and by using topographic maps at scales of 1:62,500 and 1:24,000 with contour intervals of 20 feet (References 8, 9, and 10). The 100- and 500-year flood boundaries for Highland Lake and Long Lake were delineated using the topographic maps referenced above. In cases where the 100- and 500-year flood boundaries are close together, only the 10-year boundary has been shown.

For the streams studied by approximate methods, the boundary of the 100-year flood was delineated using the Flood Hazard Boundary Map for the Town of Bridgton (Reference 11). Topographic maps and aerial photographs referenced above and field checks were utilized to verify the approximate flood boundaries.

The boundaries of the 100- and 500-year floods are shown on the Flood Boundary and Floodway Map (Exhibit 3). Small areas within the flood boundaries may lie above the flood elevations and, therefore, may not be subject to flooding. Owing to limitations of the map scale and lack of detailed topographic data, such areas are not shown.

4.2 Floodways

Encroachment on flood plains, such as artificial fill, reduces the flood-carrying capacity, increases the flood heights of streams, and increases flood hazards in areas beyond the encroachment itself. One aspect of flood plain management involves balancing the economic gain from flood plain development against the resulting increase in flood hazard. For purposes of the Flood Insurance Program, the concept of a

floodway is used as a tool to assist local communities in this aspect of flood plain management. Under this concept, the area of the 100- year flood is divided into a floodway and a floodway fringe. The floodway is the channel of a stream plus any adjacent flood plain areas that must be kept free of encroachment in order that the 100-year flood can be carried without substantial increases in flood heights. Minimum standards of the FEMA limit such increases in flood heights to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this report are presented to local agencies as minimum standards that can be adopted or that can be used as a basis for additional studies.

The floodways presented in this study were computed on the basis of equal conveyance reduction from each side of the flood plains. The results of these computations are tabulated at selected cross sections for each stream segment for which a floodway is computed (Table 3).

As shown on the Flood Boundary and Floodway Map (Exhibit 3), the floodway widths were determined at cross sections; between cross sections, the boundaries were interpolated. In cases where the boundaries of the floodway and the 100-year flood are either close together or collinear, only the floodway boundary has been shown.

The area between the floodway and the boundary of the 100-year flood is termed the floodway fringe. The floodway fringe thus encompasses the portion of the flood plain that could be completely obstructed without increasing the water-surface elevation of the 100-year flood by more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to flood plain development are shown in Figure 4.

5.0 INSURANCE APPLICATION

In order to establish actuarial insurance rates, the FEMA has developed a process to transform the data from the engineering study into flood insurance criteria. This process includes the determination of reaches, Flood Hazard Factors (FHFs), and flood insurance zone designations for each flooding source affecting the Town of Bridgton.

5.1 Reach Determinations

Reaches are defined as lengths of watercourses having relatively the same flood hazard, based on the average weighted difference in water-surface elevations between the 10- and 100-year floods. This difference does not have a variation greater than that indicated in the following table for more than 20 percent of the reach.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE [1]	WIDTH (FT.)	SECTION AREA (SQ. FT.)	MEAN VELOCITY (F.P.S.)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (FEET)
Corn Shop Brook								
A	210	84	484	0.6	402.5	402.5	403.5	1.0
B	580	28	138	2.1	402.9	402.9	403.9	1.0
C	1,060	253	1,353	0.2	404.8	404.8	405.8	1.0

[1]Feet above confluence with Stevens Brook

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF BRIDGTON, ME

(CUMBERLAND CO.)

FLOODWAY DATA

CORN SHOP BROOK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FT.)	SECTION AREA (SQ. FT.)	MEAN VELOCITY (F.P.S.)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (FEET)
Stevens Brook								
A	804[1]	121	491	6.3	346.3	346.3	347.3	1.0
B	1,359[1]	117	407	7.5	370.5	370.5	371.5	1.0
C	2,364[1]	191	1,197	2.6	389.5	389.5	390.5	1.0
D	2,948[1]	99	678	4.5	390.5	390.5	391.5	1.0
E	3,431[1]	74	447	6.8	394.3	394.3	395.3	1.0
F	3,846[1]	76	377	8.1	398.3	398.3	399.3	1.0
G	4,396[1]	124	788	3.9	401.3	401.3	402.3	1.0
H	4,828[1]	75	624	4.9	402.1	402.1	403.1	1.0
I	5,412[1]	117	1,015	2.9	403.4	403.4	404.4	1.0
J	6,748[1]	95	673	1.0	403.5	403.5	404.5	1.0
K	7,720[1]	44	180	4.1	410.4	410.4	411.4	1.0
Willett Brook								
A	110[2]	223	1,703	1.7	403.5	403.5	404.5	1.0
B	1,770[2]	176	1,434	2.0	404.6	404.6	405.6	1.0
C	3,870[2]	172	1,186	2.4	406.0	406.0	407.0	1.0

[1]Feet above Kansas Road

[2]Feet above confluence with Stevens Brook

TABLE 3

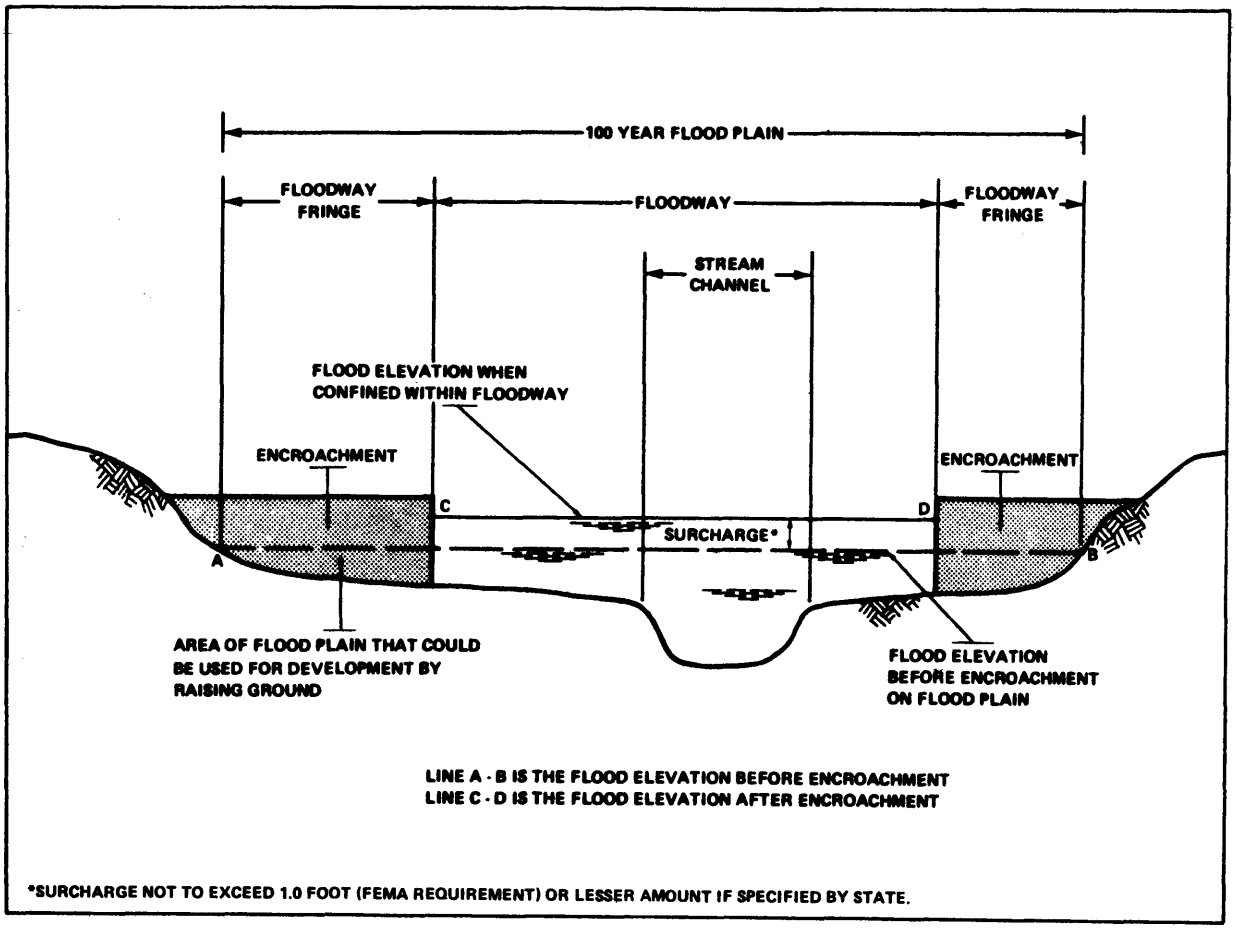
FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF BRIDGTON, ME

(CUMBERLAND CO.)

FLOODWAY DATA

STEVENS BROOK AND WILLETT BROOK



FLOODWAY SCHEMATIC Figure 4

Average Difference Between 10- and 100-Year Floods	Variation
Less than 2 feet	0.5 foot
2 to 7 feet	1.0 foot
7.1 to 12 feet	2.0 feet
More than 12 feet	3.0 feet

The locations of the reaches determined for the flooding sources of the Town of Bridgton are shown on the Flood Profiles (Exhibit 1) and are summarized in the Flood Insurance Zone Data Table (Table 4).

In lacustrine areas, reaches are limited to the distance for which the difference between the 10- and 100-year flood elevations does not vary more than 1.0 foot. Using these criteria, the Bridgton shoreline qualifies as two reaches whose flooding sources are Highland Lake and Long Lake. The locations of these reaches are shown on the Flood Insurance Rate Map.

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FHF	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10 YR.)	2% (50 YR.)	0.2% (500 YR.)			
Stevens Brook Reach 1	10	-2.6	-0.6	+1.9	025	A5	Varies
Willett Brook Reach 1	10	-2.6	-0.6	+1.9	025	A5	Varies
Corn Shop Brook Reach 1	10	-2.6	-0.6	+1.9	025	A5	Varies
Long Lake Reach 1	05,10	-1.2	-0.4	+0.7	010	A2	274
Highland Lake Reach 1	05,10	-0.5	-0.1	+0.4	005	A1	428

[1]Flood Insurance Rate Map Panel
[2]Weighted Average
[3]Rounded to the nearest foot - see map

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF BRIDGTON, ME

(CUMBERLAND CO.)

FLOOD INSURANCE ZONE DATA

STEVENS BROOK, WILLETT BROOK, CORN SHOP BROOK, LONG LAKE AND HIGHLAND LAKE

5.2 Flood Hazard Factors

The FHF is the FEMA device used to correlate flood information with insurance rate tables. Correlations between property damage from floods and their FHFs are used to set actuarial insurance premium rate tables based on FHFs from 005 to 200.

The FHF for a reach is the average weighted difference between the 10- and 100-year flood water-surface elevations expressed to the nearest 0.5 foot, and shown as a three-digit code. For example, if the difference between water-surface elevations of the 10- and 100-year floods is 0.7 foot, the FHF is 005; if the difference is 1.4 feet, the FHF is 015; if the difference is 5.0 feet, the FHF is 050. When the difference between the 10- and 100-year water-surface elevations is greater than 10.0 feet, accuracy for the FHF is to the nearest foot.

5.3 Flood Insurance Zones

After the determination of reaches and their respective FHFs, the entire incorporated area of the Town of Bridgton was divided into zones, each having a specific flood potential or hazard. Each zone was assigned one of the following flood insurance zone designations:

Zone A:	Special Flood Hazard Areas inundated by the 100-year flood, determined by approximate methods; no base flood elevations shown or FHFs determined.
Zones A1, A2, and A5:	Special Flood Hazard Areas inundated by the 100-year flood, determined by detailed methods; base flood elevations shown, and zones subdivided according to FHF.
Zone B:	Areas between the Special Flood Hazard Area and the limits of the 500-year flood, including areas of the 500-year flood plain that are protected from the 100-year flood by dike, levee, or other water control structure; also, areas subject to certain types of 100-year shallow flooding where depths are less than 1.0 foot; and areas subject to 100-year flooding from sources with drainage areas less than 1 square mile. Zone B is not subdivided.
Zone C:	Areas of minimal flooding.

Table 4, "Flood Insurance Zone Data," summarizes the flood elevation differences, FHFs, flood insurance zones, and base flood elevations for the flooding sources studied in detail in the Town of Bridgton.

5.4 Flood Insurance Rate Map Description

The Flood Insurance Rate Map for the Town of Bridgton is, for insurance purposes, the principal result of the Flood Insurance Study. This map (published separately) contains the official delineation of flood insurance zones and base flood elevation lines. Base flood elevation lines show the locations of the expected whole-foot water-surface elevations of the base (100-year) flood. This map is developed in accordance with the latest flood insurance map preparation guidelines published by the FEMA.

6.0 OTHER STUDIES

In 1974, the SCS published a Flood Hazard Analyses for the Crooked River in the Towns of Casco and Naples (Reference 12). Information in that report agrees with the information presented in this Flood Insurance Study.

A Public Law 566 Watershed Protection and Flood Prevention project was authorized for Stevens Brook in April 1969 (Reference 5). The project included the construction of several floodwater retarding structures that were designed to prevent flooding in Bridgton from Willett, Corn Shop, and Stevens Brooks. Due to subsequent land-use changes and increased construction costs, the project was determined to be no longer feasible and has been de-authorized. Information used for this project agrees with the information presented in this study.

Flood Insurance Studies for the Towns of Harrison, Naples, and Waterford are currently being prepared (References 13, 14, and 15). The results of those studies will be in exact agreement with the results of this study. The Flood Hazard Boundary Map for the Town of Bridgton has been published (Reference 11).

This study is authoritative for purposes of the Flood Insurance Program, and the data presented here either supersede or are compatible with previous determinations.

7.0 LOCATION OF DATA

Survey, hydrologic, hydraulic, and other pertinent data used in this study can be obtained by contacting the office of the Insurance and Mitigation Division of the Federal Emergency Management Agency, Regional Director, Region I Office, J. W. McCormack Post Office and Courthouse Building, Room 462, Boston, Massachusetts 02109.

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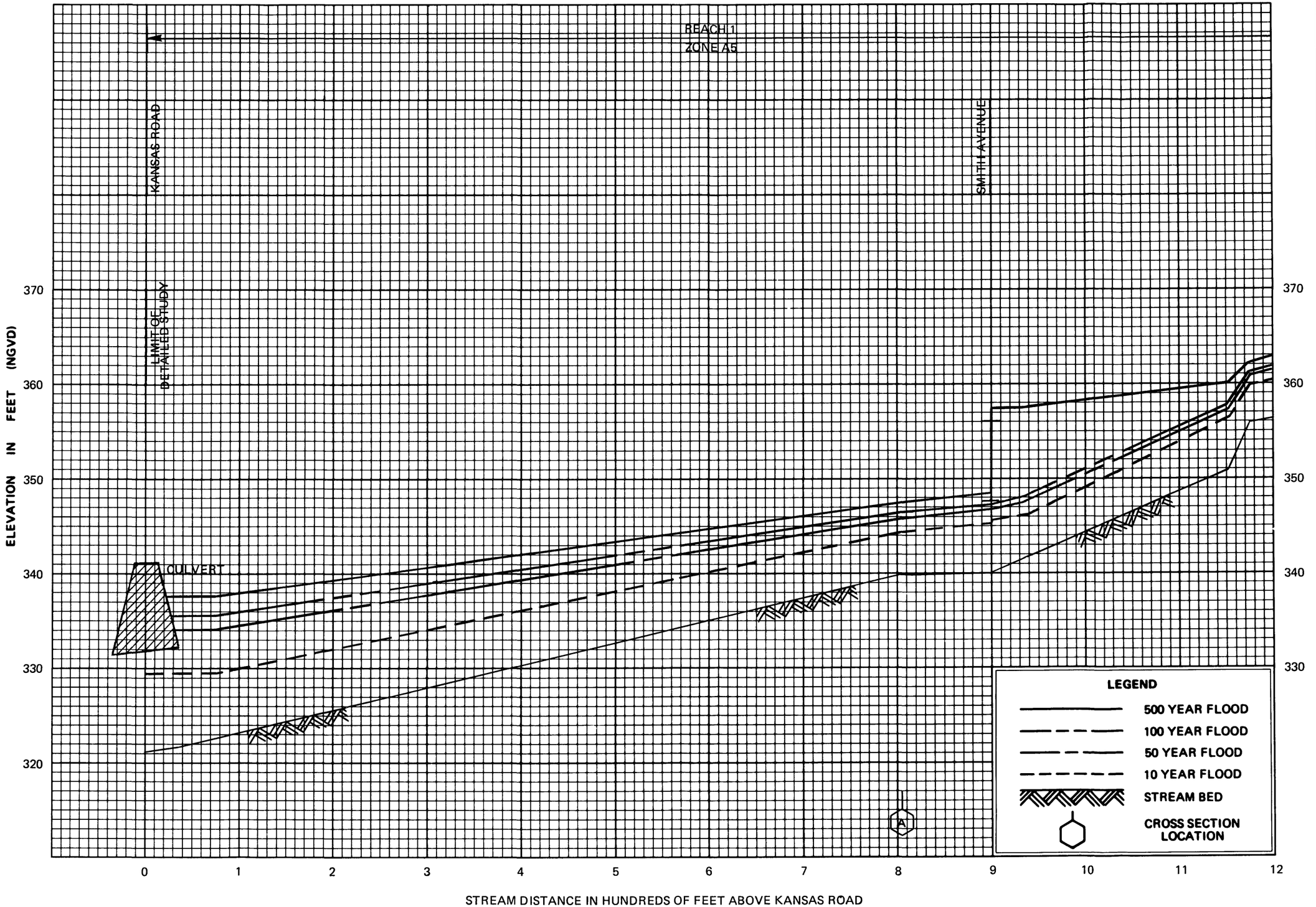


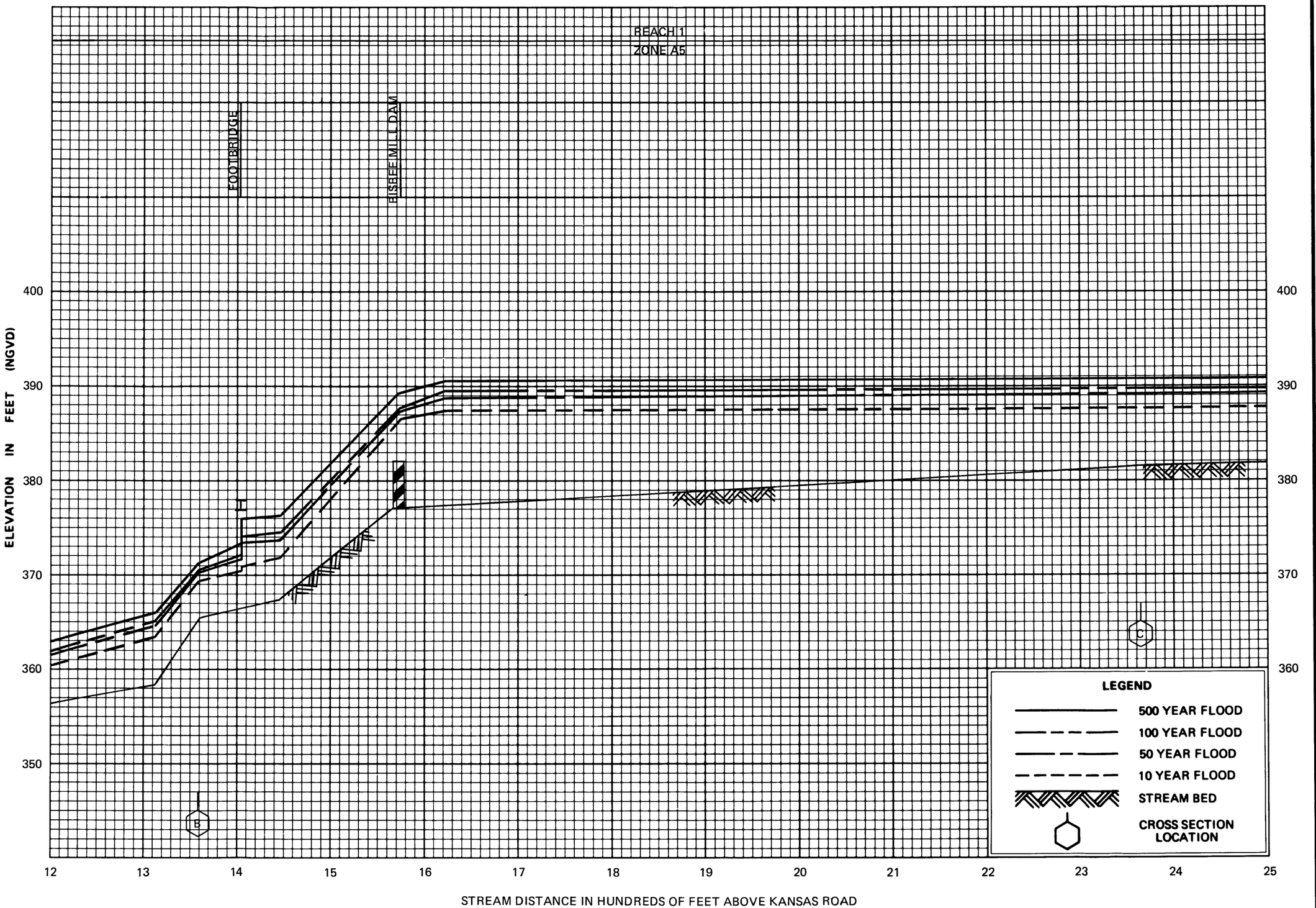
FLOOD PROFILES

STEVENS BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF BRIDGTON, ME
(CUMBERLAND CO.)

01P



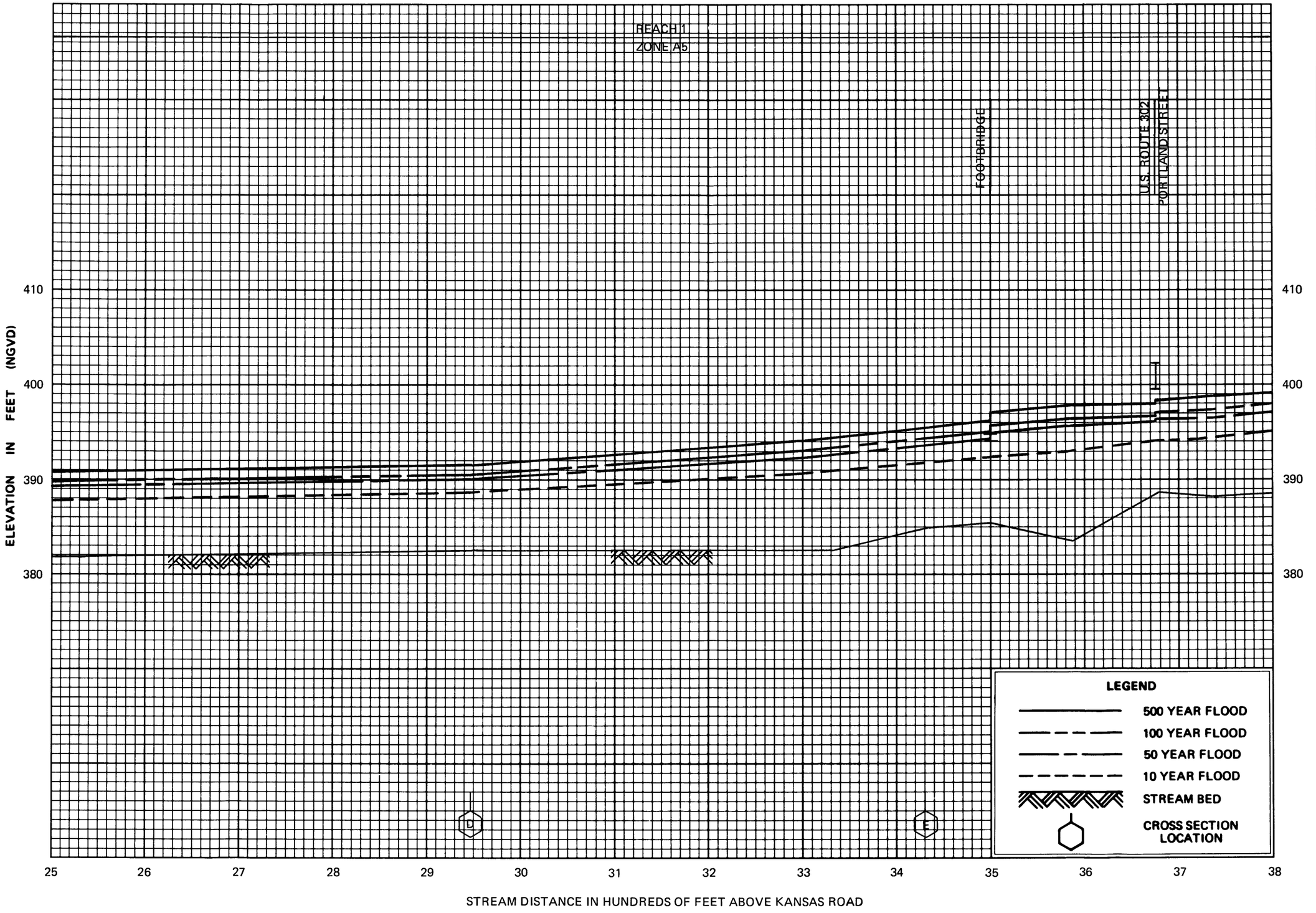
FLOOD PROFILES

STEVENS BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF BRIDGTON, ME
(CUMBERLAND CO.)

02P



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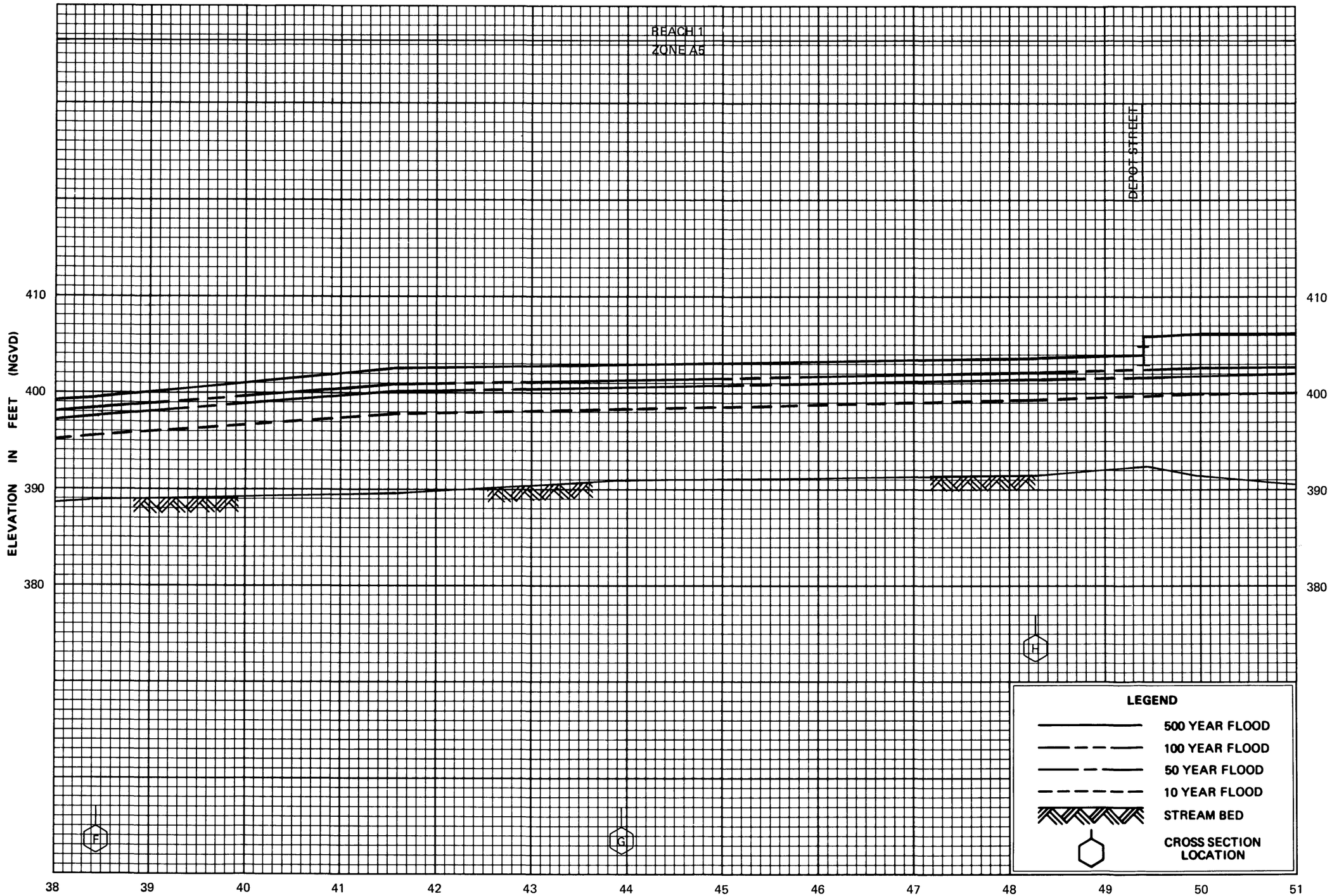
03P



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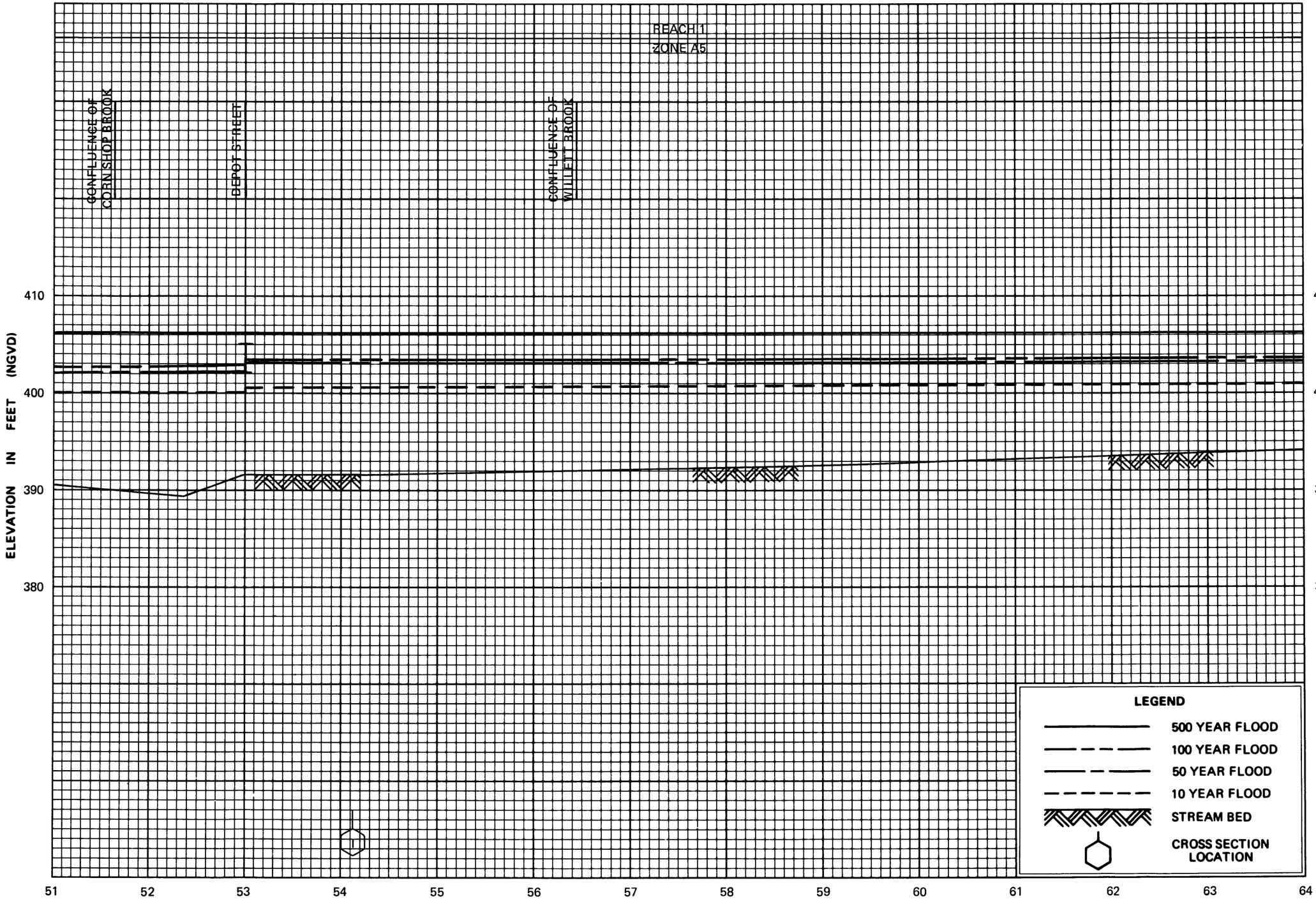
04P



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05P

REACH 1
ZONE A5

U.S. ROUTE 302
MAIN STREET
TANNERY DAM
BEACON STREET

ELEVATION IN FEET (NGVD)

420
410
400
390

64 65 66 67 68 69 70 71 72 73 74 75 76 77

STREAM DISTANCE IN HUNDREDS OF FEET ABOVE KANSAS ROAD

LEGEND

- 500 YEAR FLOOD
- 100 YEAR FLOOD
- 50 YEAR FLOOD
- 10 YEAR FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

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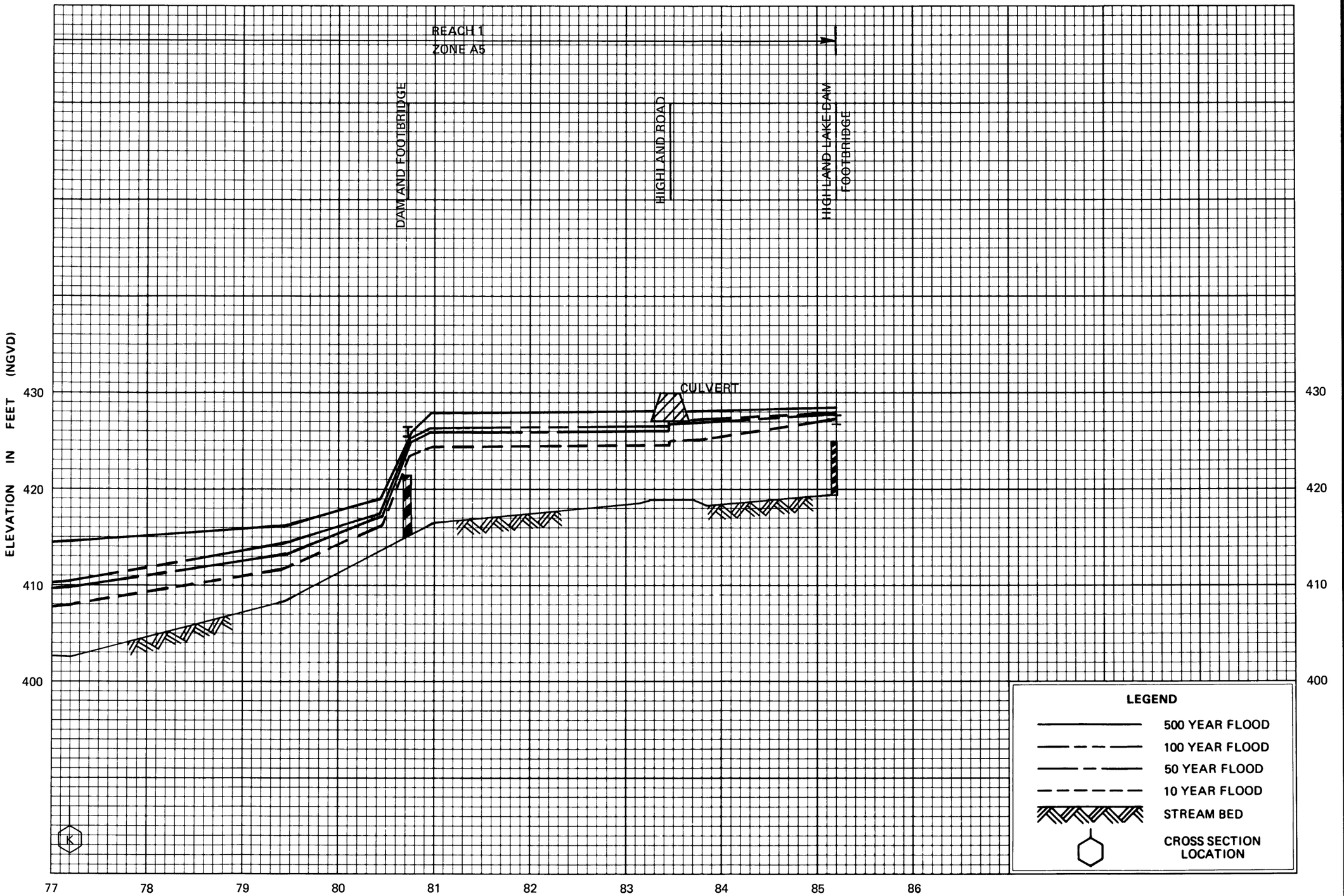
06P



FLOOD PROFILES

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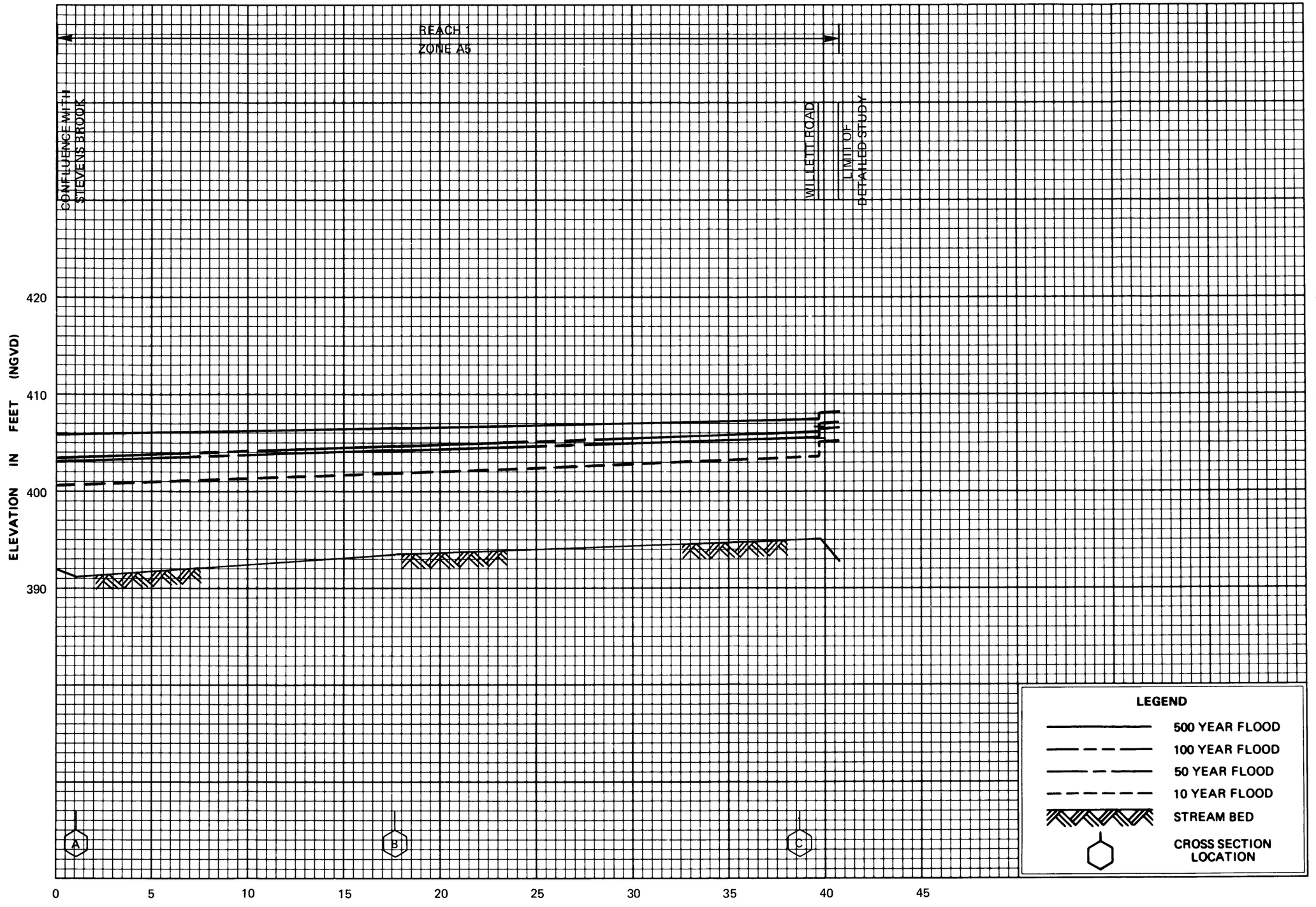
07P



FLOOD PROFILES

WILLETT BROOK

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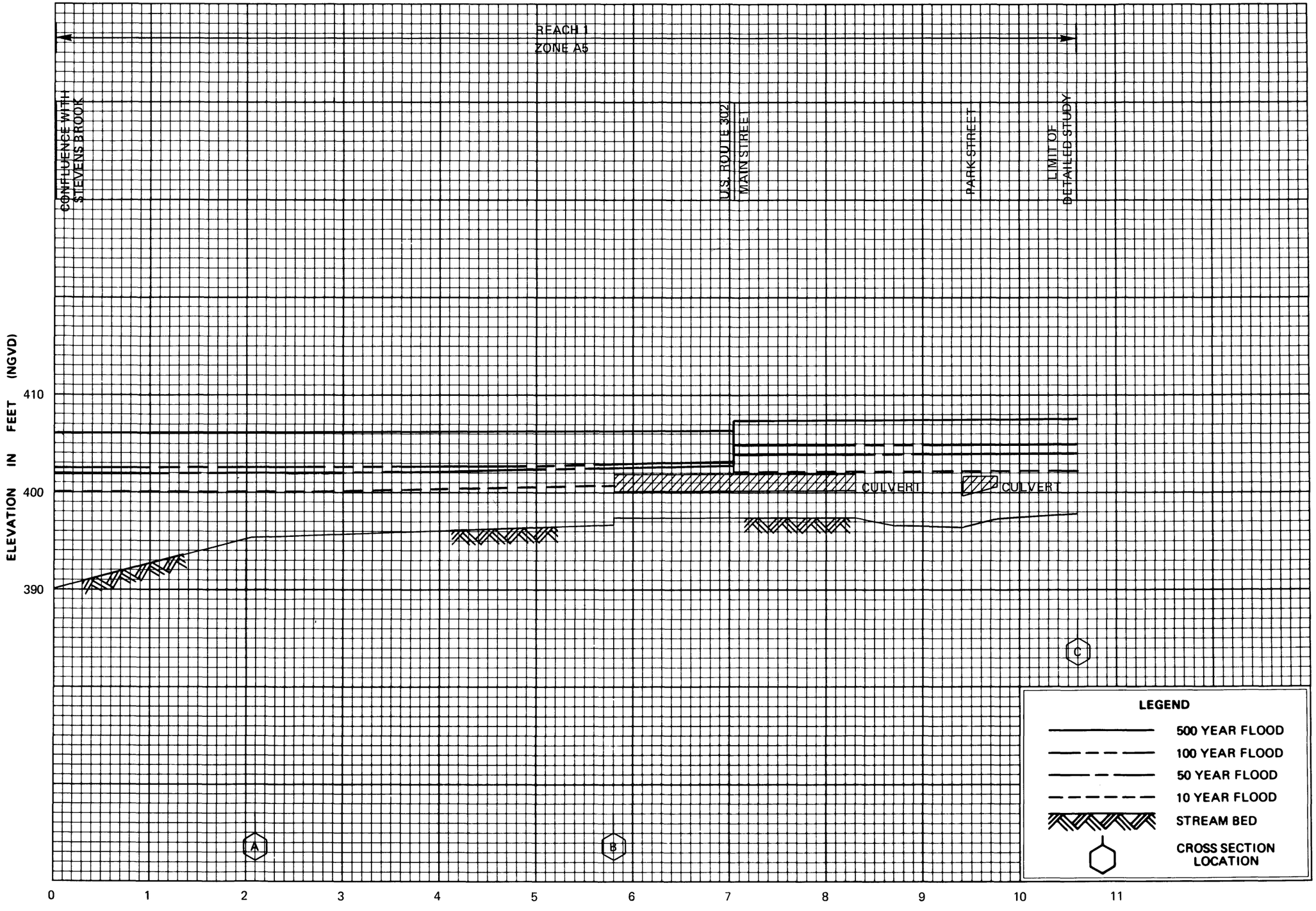
(CUMBERLAND CO.)

08P



FLOOD PROFILES

CORN SHOP BROOK

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09P

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